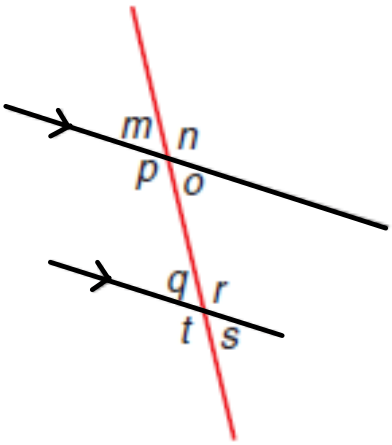
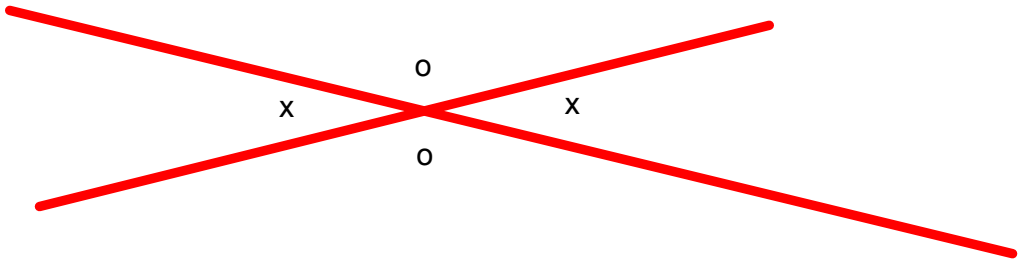
L3 - Angles Involving Parallel Lines



How can you tell that the two black lines are supposed to be parallel?

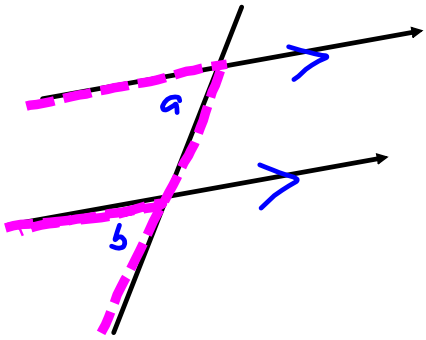
Which angles are the same?

Opposite Angle Theorem: OAT

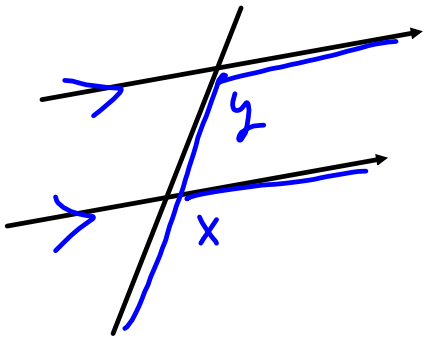


When two straight lines cross, the opposite angles formed are the same

Corresponding Angles (F Pattern)

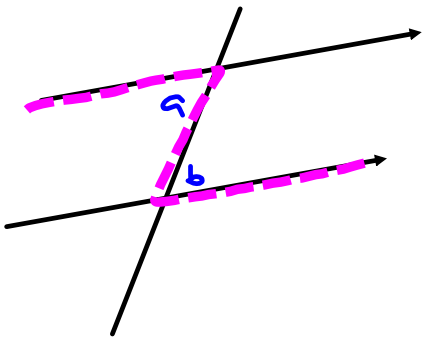


$\angle a = \angle b$

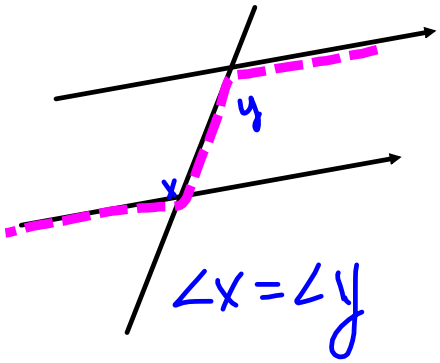


$\angle x = \angle y$

Alternate Angles (Z Pattern)

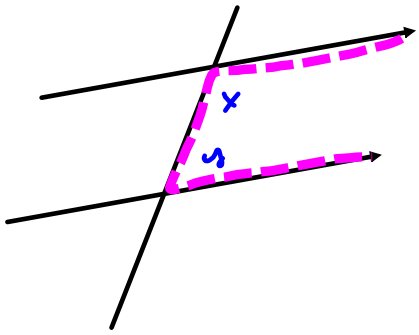


$\angle a = \angle b$ (Z pattern)

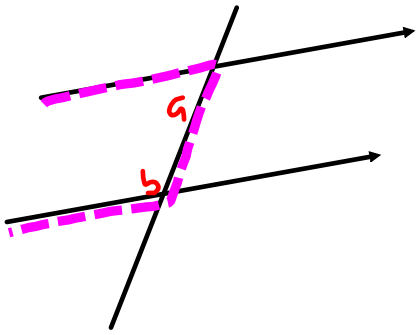


$\angle x = \angle y$

Interior Angles (C Pattern)

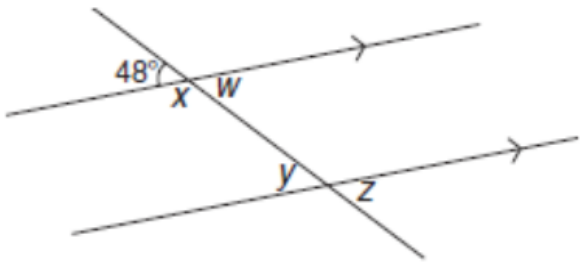


$\angle x + \angle y = 180^\circ$



$\angle a + \angle b = 180^\circ$

We can use these relationships to determine the measures of other angles when one angle measure is known.



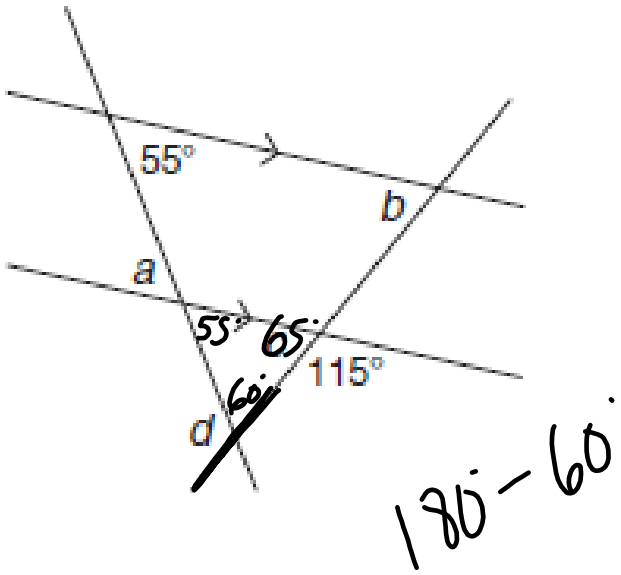
< w = 48° (OAT)

< x = 132°

< y = 48° (OAT)

< z = 48° (F pattern)

Find the unknown angles.



180 − 60

< a = 55° (Z pattern)

< b = 65° (F pattern)

< c = 65° (sup)

< d = 120°

Assigned Work

p.89-90
#2ab, 4,5,6